



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management  
DIVISION OF SITE REMEDIATION  
291 Promenade Street  
Providence, R.I. 02908-5767

6 June 1996

Mr. Philip Otis, P.E., Remedial Project Manager  
US Department of the Navy, Northern Division  
Code 18, Mail Stop #82  
10 Industrial Highway  
Lester, PA 19113-2090

RE: Navy Responses to RIDEM Comment For:  
Draft Final IR Program Site 09, Allen Harbor Landfill  
Phase III Remedial Investigation  
Naval Construction Battalion Center, Davisville RI  
Responses Submitted on 9 April 1996 and 3 May 1996

Dear Mr. Otis;

The Rhode Island Department of Environmental Management (RIDEM) Division of Site remediation has reviewed the above referenced responses to comments. Only those responses that RIDEM has remaining concerns with have been commented on. Please be advised that RIDEM is anticipating additional groundwater sampling in accordance with our discussions at the 6 May 1996 BCT meeting to resolve the issue of groundwater contamination to the harbor and near shore sediments.

If you have any questions or require additional information please call me at (401) 277 3872 ext. 7138.

Sincerely,

Richard Gottlieb, P.E.  
Principal Sanitary Engineer

cc: W. Angell, DEM DSR  
C. Williams, EPA Region 1

letter.rwg/richg

**DRAFT FINAL  
IR PROGRAM SITE 09, ALLEN HARBOR LANDFILL  
PHASE III REMEDIAL INVESTIGATION  
NAVAL CONSTRUCTION BATTALION CENTER  
DAVISVILLE, RHODE ISLAND**

**Comment 4. Page 5-13, Section 5.2.1.3, Organic Carbon Content;  
Paragraph 2, Last Sentence.**

*However, subsurface soil samples collected from an adjacent site (IR Program Site 07, Calf Pasture Point) exhibited the TOC concentrations shown in the Table below.*

Please explain how the TOC from Site 07 would be reflective of the TOC at Site 09 (Allen harbor Landfill). In addition, please state how the fill layer at Site 09 is accounted for with respect to this parameter.

**Response:** The use of TOC data from Site 07 made use of the best information available. The depth below grade of these samples will be added to the Site 09 RI text. Although the landfill activity could result in some differences in site-specific TOC concentrations in the upper layer, the similarity between two adjacent sites would be expected to increase in the deeper geological units. The 0.8, 0.6, and 0.4 TOC values used in the model are slightly lower than the corresponding values from Site 07 and are thus, a conservative assumption relative to solute transport, particularly the fill.

**Comment:** The results of Table 5-18 (Estimated Harbor Sediment Concentrations Potentially Attributable to Shallow Ground-Water Migrating from the Site for Selected Sediment Organic Content) indicate that higher TOC values yield higher concentrations of chemicals that are transported. Therefore the use of values (0.8, 0.6, and 0.4 percent) which are slightly lower than corresponding values from Site 07 do not appear to be conservative, rather higher values for TOC should have been chosen.

While it appears reasonable, that at deeper depths, the TOC values at Site 07 would be similar to TOC values from Site 09, due to their close proximity, it does not seem appropriate to make the same assumption about upper layer conditions. This is because the soil at the upper layer of site 09 is mixed with trash while the surface soil at Site 07 is not. Therefore, at a minimum TOC values should be obtained from the upper layer of Site 09.

**Comment 7. Page 5-22, Section 5.3.3, Solute Transport Model Parameters;  
Table on Page.**

Please explain why in this Table soil bulk density ranges from 1.38 to 1.88 g/cc while in section 5.1.3 a soil bulk density of 2.0 g/cc is used for the NAPL calculations. In addition, the Table on page 5-14, delineating TOC values, is not

while in section 5.1.3 a soil bulk density of 2.0 g/cc is used for the NAPL calculations. In addition, the Table on page 5-14, delineating TOC values, is not consistent with the values shown in this Table. It would seem that values for soil parameters should be consistent from one aspect of the model to the other.

**Response:** The NAPL calculation in Section 5.1.3 will be redone using an average bulk density from within the 1.38 - 1.88 g/cc range used for the ground water model. The TOC values in the table on page 5-14 were reported results from Site 07, while the values on page 5-22 were the conservatively selected values used in the Site 09 model as discussed in Comment 4. The comparison between the Site 07 TOC values and the conservatively selected model values will be expanded in the text.

**Comment:** With respect to the conservatively selected values please refer to comment 4.